



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/805,682 | 03/13/2001 | William J. Labarge | DP-302561/DEP-0128 | 3642 |

7590 02/13/2002

VINCENT A. CICHOSZ
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

JOHNSON, EDWARD M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1754

DATE MAILED: 02/13/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-5

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/805,682 | LABARGE ET AL. | |
| | Examiner | Art Unit | |
| | Edward M. Johnson | 1754 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-16,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,16,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Art Unit: 1754

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 fails to further limit claim 1, from which it depends (through a canceled claim).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 depends from a canceled claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1754

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 5-14, 16, and 23 are rejected under 35

U.S.C. 102(b) as being anticipated by Mabilon et al. 5,051,392.

Regarding claim 1, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising a porous layer containing calcium and neodymium (see abstract)..

Regarding claim 3, Mabilon '392 discloses about 0.1 to about 35% calcium and neodymium (see abstract).

Regarding claims 5-6, Mabilon '392 discloses calcium (see abstract).

Regarding claims 7-8, Mabilon '392 discloses neodymium (see abstract).

Regarding claims 9-12, Mabilon '392 discloses 0-35% zirconium (see column 2, lines 32-37).

Regarding claims 13-14, Mabilon '392 discloses mixing ammonia with alumina (see column 5, lines 64-68 and Example 16).

Regarding claim 16, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising a porous layer containing mixtures of calcium and neodymium (see abstract), zeolite (see column 3, line 54), 0-35% zirconium (see column 2, lines 32-37), and ceramic (see column 3, line 26).

Art Unit: 1754

Regarding claim 23, Mabilon '392 discloses oxides of calcium and neodymium (see abstract)

6. Claims 1-4 and 16-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Campbell 4,988,660.

Regarding claim 1, Campbell '660 discloses catalysts comprising neodymium (see column 3, line 45) and calcium (see column 7 lines 52-60).

Regarding claims 16 and 20-22, Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18), the use of binder (see column 7, lines 38-40). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation (at least about 2% may include values close or equal to zero).

Regarding claims 2-4 and 19 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation.

Regarding claim 23, Campbell '660 discloses calcium oxide (see column 7, lines 52-60).

Art Unit: 1754

7. Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Demmel 5,545,604.

Regarding claims 21-22, Demmel '604 discloses a catalyst comprising 50-95% calcium oxide in the final product (see column 15, lines 49-53), alumina as binder, and 40% alumina (see column 31-33 and 36-38). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation (at least about 2% may include values close or equal to zero).

Regarding claim 23, Demmel '604 discloses CaO (see column 15, lines 49-53).

Allowable Subject Matter

9. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although calcium oxide, neodymium catalysts with aluminum oxide binders appear to be well known in the art, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use an ammonium aluminum oxide sol binder in an amount of at least about 2 wt% and less than about 6 wt% in the catalyst of the instant claim 13.

Response to Arguments

8. Applicant's arguments filed 1/9/02 have been fully considered but they are not persuasive.

The rejection of claims 1, 13, and 15 over Cornelison '929 has been withdrawn in view of Applicant's amendment.

It is argued that the present application teaches a NOx occluding catalyst comprising an outer layer having at least about 50 wt% of alkaline earth component. This is not persuasive because claims must be given their broadest reasonable interpretation. In re Morris, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). It is not considered unreasonable for one skilled in the art to interpret the claimed range of "at least about 50%" as incorporating at least some of the values encompassed by the prior art range of "0.1 to about 35%".

It is argued that Campbell discloses alkali metal doped perovskites useful in the oxidative coupling of alkanes. This is not persuasive because a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative

Art Unit: 1754

difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The claim lacks novelty because the instantly claimed catalyst and the catalyst of the prior art have the same ingredients. Applicant does not appear to allege any difference between the instantly claimed catalyst and that disclosed in Campbell other than the intended use of NO_x reduction. Nor does Applicant appear to allege that the catalyst disclosed in Campbell does not, in fact, occlude NO_x.

It is argued that with further regard to Campbell in relation to the Examiner's rejection of claims 4, 16, 19, and 20. This is not persuasive because claims must be given their broadest reasonable interpretation. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). It is not considered unreasonable for one skilled in the art to interpret the instantly claimed range of "at least about 70%" as incorporating at least some of the values encompassed by the prior art range of "at least 0.01, say, about 0.1 to 60%", the former portion of which, by itself, includes the instantly claimed range.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Application/Control Number: 09/805,682


Page 9

Art Unit: 1754

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ

February 9, 2002


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700